

Status of the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) A spatial light modulator that modulates an incident wavefront, comprising:

reflective devices that individually modulate portions of the incident wavefront;

a continuous solid and substantially rigid substrate; and

an actuator comprising actuator elements and first and second sets of electrodes,

wherein respective electrodes in the first set of electrodes are coupled to a first portion of respective ones of the actuator elements and are coupled to respective ones of the reflective devices, and

wherein respective electrodes in the second set of electrodes are coupled to a second portion of the respective ones of the actuator elements and are coupled to the continuous solid and substantially rigid substrate.

2.-9 (cancelled)

10. (original) The spatial light modulator of claim 1, wherein the actuator elements are configured such that the reflective devices form an overall curved shape.

11. (currently amended) The spatial light modulator of claim 1, wherein the actuator elements are formed in varying heights and positions on the continuous solid and substantially rigid substrate, such that varying wavefront patterns are generated by light reflecting therefrom.

12-28. (cancelled)

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29. (currently amended) The ~~system~~ spatial light modulator of claim 1, wherein said electrodes cause a material of said actuator elements to expand and contract in a piston-like motion to move said respective reflective devices along a longitudinal axis of said actuator elements, wherein a reflecting surface of said respective reflecting device remains parallel to a plane formed through a surface of the continuous solid and substantially rigid substrate.

30. (currently amended) The ~~system~~ spatial light modulator of claim 29, wherein said material comprises one of lead zirconate titanate (PZT), zinc oxide (ZnO), or polyvinylidene fluoride (PVDF) polymer films.

31. (new) The spatial light modulator of claim 1, wherein the reflective devices individually modulate the portions of the incident wavefront through actuation with respect to each other, which causes at least one of a phase shift or interference pattern in a reflected wavefront.

32. (new) The spatial light modulator of claim 1, wherein all the actuator elements are coupled to each other, such that movement of each of the actuator elements is controlled with respect to each other to form an overall desired reflecting configuration of the reflecting devices.

33. (new) The spatial light modulator of claim 1, wherein the continuous solid and substantially rigid substrate provides a common reference plane for a reflecting surface of each of the reflective devices, such that the reflecting surface of the reflective devices are actuated with respect to each other to perform the modulating of the incident wavefront.

34. (new) The spatial light modulator of claim 1, further comprising:
an insulating layer coupled to the substrate that dissipates heat from the respective electrodes in the second set of electrodes.

35. (new) The spatial light modulator of claim 1,
wherein the second set of electrodes comprises a two-dimensional array of electrodes and each respective one of the two-dimensional array of electrodes is coupled to a second portion of the respective ones of the actuator elements and is coupled to the substrate.

36. (new) The system spatial light modulator of claim 1, wherein said electrodes are energized to cause a material of said actuator elements to expand and contract to move said respective reflective devices relative to a longitudinal axis of said actuator elements, wherein said movement causes a reflecting surface of said respective reflecting device to become unparallel to a plane parallel to a surface of the continuous solid and substantially rigid substrate.